Foreign Agriculture

October 9, 1978

Foreign
Agricultural
Service
U.S. DEPARTMENT
OF AGRICULTURE

2 U.S. Farm Exports to Saudi Arabia Seen Doubling

5 Adverse Weather Cuts Mexico's Honey Crop

6 EC Adjustment Period Over, Irish Project Modest Growth for '78

7 Pakistan: Expanding Market For U.S. Tallow

8 Swiss Want Self-Sufficiency in Food Output

10 Poland's Grain Imports To Rise

Beekeepers removing frames of honeycomb from some modern hives in Mexico.

U.S. Farm Exports To Saudi Arabia Seen Doubling This Year

By John B. Parker

Total value of U.S. farm products exported to booming Saudi Arabia during 1978 may reach $350 million—double last year's level and about 17 percent of total Saudi agricultural imports this year. New supermarkets, urban growth, and imported food for contract workers are contributing significantly to the rapid growth in Saudi food imports.

Spectacular gains in U.S. exports of rice, wheat, apples, and many processed foods to Saudi Arabia are expected to push the total value of U.S. farm products to that country to about $350 million during 1978—double the $171 million level reached in 1977.

Soaring shipments of U.S. rice will account for about half the increase in value. Larger sales of wheat, processed foods, and apples also will contribute to the rise.

Saudi Arabia was the leading U.S. export market for apples in value during December 1977, and even larger orders have been indicated for delivery in late 1978.

Saudi Arabia has become one of the top five U.S. export markets for corn oil, beverage ingredients, poultry feed, peanut butter, and a long list of processed foods.

Total Saudi agricultural imports during 1978 are likely to approach $2 billion—up from $1.2 billion in 1977 and $568 million in 1974. The U.S. share of Saudi agricultural imports reached 19.4 percent in 1974, but may fall to 17 percent this year.

Higher prices for processed foods and larger deliveries of apples, beef, and other relatively new-to-market items will cause the monthly value of U.S. shipments to Saudi Arabia to accelerate in late 1978.

The opening of new supermarkets, rapid urban growth, and large imports to feed contract workers will contribute to the rapid growth in Saudi Arabia's food imports. In addition to the expanding needs of 7 million native Saudis, more food must be imported for nearly 2 million immigrant workers.

U.S. agricultural exports to Saudi Arabia reached $206 million during the first 9 months of fiscal 1978 (October-June)—up from $101 million during the comparable part of fiscal 1977.

Some of the striking gains in U.S. exports during the first 9 months of fiscal 1977 included (in millions of dollars): Rice, 21.5 to 77.6; wheat, 0.1 to 7.1; fruits and preparations, 2.6 to 16.9; vegetables and preparations, 6.2 to 14.3; oilseeds and products, 6.8 to 12.6; and nuts and preparations, 1.2 to 2.5.

The U.S. share would be lower without the entry of new items. U.S. exports of apples to Saudi Arabia in 1978 may exceed $16 million—up from $4.8 million in 1977. Beef exports could rise to a total value for the year of $8 million. U.S. exports of frozen chickens also are increasing.

Rice remains the top U.S food export to Saudi Arabia. U.S. exports of rice to Saudi Arabia may exceed 220,000 metric tons, up substantially from the 90,000 tons shipped in 1977. U.S. rice exports to Saudi Arabia reached 141,000 tons during the first 9 months of fiscal 1978—up from 53,000 tons during the comparable part of fiscal 1977.

Higher prices probably will cause the value of U.S. rice exports to Saudi Arabia to increase more than $70 million—possibly to a record $112 million.

Shortages of rice from Thailand and Pakistan caused a sharp increase in rice purchases from the United States.

Also—because of the way the Saudi Government computes the subsidy for rice imports—private importers in Jidda and Dammam tend to expand their purchases of top-quality rice when world market prices are high. All of the landed costs of rice over an established unit price are paid by the Government.

Rising demand for parboiled rice in Saudi cities and new distribution facilities contributed to larger sales.

Also, most of the country's immigrant workers are heavy consumers of rice. Early this year, a shortage of rice in the Yemen Arab Republic caused Yemeni workers to buy more rice in Saudi Arabia for their families in Yemen.

U.S. wheat exports to Saudi Arabia in fiscal 1978 are likely to be about 100,000 tons. Australia's short supply of wheat for export contributed to the U.S. entry into the Saudi market this year.

The opening of three new flour mills under the management of a U.S. firm also has contributed to the rise in U.S. wheat sales to Saudi Arabia. The mills at Dammam and Jidda will rely heavily upon imported wheat, while domestic sources should provide much of the wheat used by the flour mill near Riyadh.

Imports of wheat flour are likely to rise moderately in 1968, despite the increased local output. Many consumers prefer the special types of imported flour that contain a small quantity of ash.

The author is an economist in USDA's Economics, Statistics, and Cooperatives Service.

Total wheat flour imports may rise slightly in 1978 to 400,000 tons, including possibly 230,000 tons from the United States. Between 1974 and 1977, total wheat flour imports rose from 146,209 tons to about 370,000 tons, while arrivals of U.S. wheat flour increased from 65,000 tons to 224,000 tons in the same period.

Saudi imports of wheat flour from the Netherlands, Canada, and West Germany also have increased markedly in the past 4 years.

Saudi production of coarse grains in 1978 is likely to fall below 250,000 tons because of locust damage. At the same time, demand for coarse grains for poultry and sheep is rising rapidly.

Total Saudi imports of coarse grains are likely to continue upward this year. Resumption of large deliveries of Thai corn is anticipated for late 1978. In 1977, Thailand exported 105,600 tons of corn and 35,000 tons of sorghum to Saudi Arabia—far above the previous year's levels.

U.S. exports of corn to Saudi Arabia in 1978 should be facilitated by the opening of new Red Sea ports.

The European Community (EC) might again become the major source of Saudi imports of barley in 1978. In 1977, the United States exported 10,489 tons of barley, valued at $1.3 million, to Saudi Arabia.

The Saudi Arabian Development Fund is helping to finance agricultural projects in Sudan that should provide more corn and sorghum in the future.

U.S. exports of soybean meal to Saudi Arabia during the first 9 months of fiscal 1978 reached 10,000 tons—nearly quadruple the level of the year-earlier period.

Imports of animal feed, including soybean meal, might reach 100,000 tons in 1978—up from about 58,000 tons in 1977. U.S. exports of soybean meal to Saudi Arabia might reach 17,000 tons in 1978—double the deliveries in 1977. Difficulty in obtaining soybean meal from Brazil or peanut meal from India contributed to the new purchases of U.S. soybean meal.

Saudi imports of pulses increased from 9,746 tons in 1975 to 16,624 tons in 1976 and rose further in 1977. Imports of Syrian and Turkish lentils and dry beans from the United States and Europe is rising.

Saudi imports of live animals and livestock products might exceed $500 million in 1978, in contrast to only $87 million in 1973. Australia and the EC have become major suppliers.

Demand for imported meat has been bolstered by difficulties in obtaining live animals from Ethiopia and Somalia. Total imports of live sheep and goats declined from nearly 1.5 million head in 1972 to about 1 million in 1977. Larger imports of sheep from Australia helped offset some of the decline in arrivals from Ethiopia and Somalia.

Imports of poultry meat increased from 10,107 tons in 1972 to about 80,000 tons in 1977. The EC, Hungary, and Brazil supply most of Saudi Arabia's imports of frozen poultry, although imports of U.S. turkeys and chicken parts increased.

U.S. exports of frozen poultry to Saudi Arabia doubled in the first half of 1978, mostly because of rising sales of chickens and turkeys, including parts. Total Saudi imports of frozen poultry will exceed $100 million in 1978, with less than 6 percent of this value coming from U.S. suppliers.

Australia and the United States have become the major suppliers of Saudi Arabia's rapidly rising beef imports. U.S. beef has become popular in restaurants of international hotels.

Larger imports of mutton from Australia and corned beef from Argentina and Brazil also have occurred in recent months.

Saudi Arabia's imports of eggs from the EC, Eastern Europe, and—more recently—the United States are rising. Imports of eggs climbed from 4,427 tons in 1973 to about 8,500 tons, valued at $15 million, in 1977.

The United States entered the Saudi market for eggs during January-June 1978, when sales exceeded $200,000. Yet this volume was only a fraction of total Saudi egg imports, which are now valued at about $2 million per month.

Disease problems have delayed plans to establish modern dairies in Saudi Arabia. Food subsidy schemes have expanded, accelerating demand for dairy products.

Imports of dairy products have increased because of greater access to refrigeration, school lunch programs, and attractive prices offered by EC and Australian suppliers. Imports of all types of milk products increased from $13.5 million in 1972 to $49.7 million in 1973, but subsided during 1974 and 1975.

New programs, particularly for school lunches, helped push milk imports to 48,000 tons, valued at $65 million, in 1977. Saudi Arabia has been a leading market for U.S. fresh milk and cream, valued at about

U.S. Processed Food Sales Team To Visit Saudi Arabia

A U.S. processed-food sales team will visit Saudi Arabia next year under FAS auspices to seek a larger share of the Saudi market for consumer-ready foods.

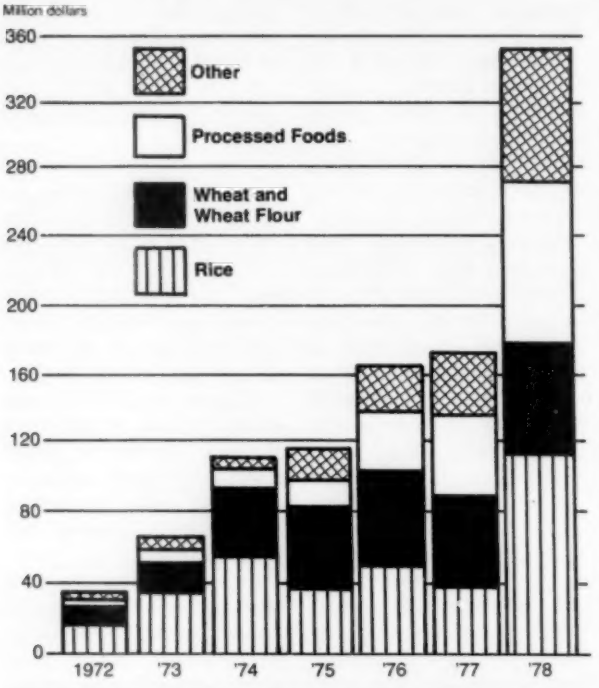
The team's May 5-16 trip will include calls on Government officials and food importers in Jiddah and Dharhan in Saudi Arabia and in neighboring Kuwait.

Firms to be represented by the sales team of about 10 persons should be manufacturers of food products that have good potential for sales in Saudi Arabia, such as meat and poultry products, canned fruits and vegetables, fruit and vegetable juices, nuts, and snack items.

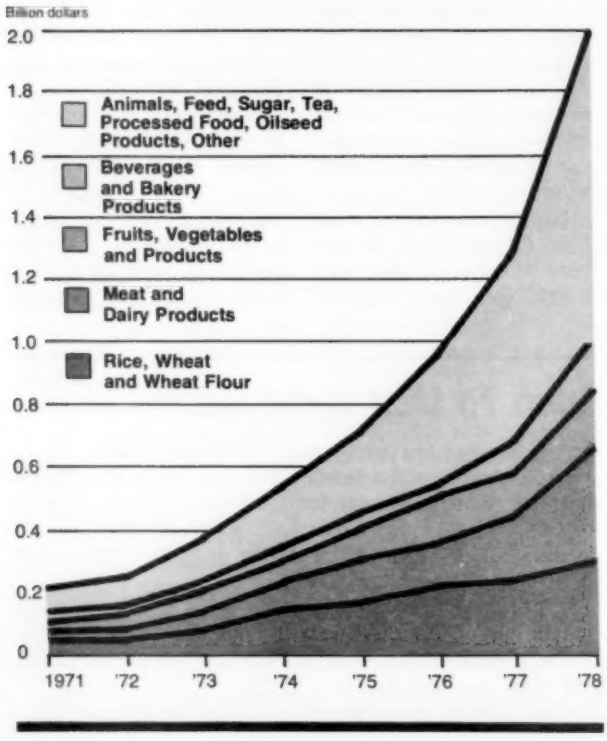
Saudi Arabia is the leading U.S. market in the Middle East for consumer-ready food products. Its imports of U.S. consumer-ready foods rose to a value of $39.2 million in calendar 1977 from $31.9 million in 1976, $13.3 million in 1975, and $8.3 million in 1974.

U.S. firms interested in possible sales in Saudi Arabia should contact the FAS Export Trade Services Division, USDA, Washington, D.C. 20250, or telephone (202) 447-7777.

U.S. Agricultural Exports to Saudi Arabia, 1972-77 and Estimate for 1978



Saudi Arabia's Total Agricultural Imports 1971-78



$1 million annually.

Imports of cheese rose from 7,238 tons in 1972 to about 19,000 tons, valued at $25 million, in 1977.

Australia and the EC supply most of Saudi Arabia's cheese imports. U.S. exports of cheese to Saudi Arabia may reach $1 million in 1978—triple the 1977 level. Sales of American cheese spread are increasing rapidly.

Imports of fruit and fruit products might reach $200 million in 1978—up from about $150 million in 1977. Saudi Arabia has become a major market for apple exporters in France, Italy, and the United States.

Total imports of apples increased from 23,305 tons in 1974 to about 44,000 tons in 1977. Even arrivals from Lebanon rebounded. The United States has shipped about 19,000 tons of apples to Saudi Arabia since October 1977.

France had a smaller apple crop in 1977, leaving smaller supplies to send to new customers such as Saudi Arabia. The first purchases of U.S. apples followed. Saudi customers like the quality, taste, and prices of U.S. apples, and the trade is likely to continue even when supplies of European and Lebanese apples become abundant.

Orange imports have increased at a slower pace than those of apples. Morocco, Egypt, Lebanon, and Gaza are some of the major sources of Saudi imports of oranges. Total imports of oranges increased from 44,564 tons in 1973 to about 70,000 tons in 1977.

Imports of fresh grapes soared from 2,753 tons in 1973 to about 12,000 tons in 1977. Imports of grapes from Italy, Greece, Cyprus, and India have increased in recent years, while arrivals from Iran and Lebanon have declined.

Saudi Arabia recently opened as a new market for U.S. pears, plums, peaches, and grapes. The value for U.S. shipments of these fresh fruits to Saudi Arabia had already reached $1 million during the first 9 months of fiscal 1978.

Saudi Arabia's imports of fruit juices rose from only $5.5 million in 1972 to $56.5 million in 1976, according to official Saudi statistics. Imports of fruit juices in 1977 were estimated at 97,000 tons, valued at $79.5 million.

Purchases of natural fruit juices from the United States, Brazil, Greece, and Malaysia increased during the past 2 years at a faster rate than imports of fruit pulp and nectar drinks from Japan and Taiwan.

A new Saudi regulation that nectar drinks must contain at least 50 percent natural fruit juice caused the price for these items to rise, while devaluation of the U.S. dollar and Brazilian cruzeiro caused prices to Saudi traders for American and Brazilian juices to decline slightly.

Heavy work in construction projects by many immigrants has been cited as a factor in imports of some items, including fruit nectars with a high sugar content, pulses, and bakery items.

Imports of nonalcoholic beverages probably will exceed $100 million in 1978. Drinking water costs more than $1 per liter, and imported canned soft drinks are often in this price range.

U.S. exports of many snack food items to Saudi Arabia are soaring. For example, U.S. exports of peanut butter to Saudi Arabia are likely to reach $1 million in 1978—up from $395,000 in 1977. □

Adverse Weather Cuts Mexico's Honey Crop

Mexico's 1978 honey crop is estimated at 49,000 metric tons, well below the record 1977 harvest of 60,000 tons but significantly above the 1970-74 average of 33,600 tons.

Weather this year in the Yucatán Península—the major honey-producing region—has been particularly unfavorable.

Exports, too, are expected to be at a lower level this year than last. In 1977, Mexico's honey exports reached a record 53,000 tons.

Mexico, the world's leading exporter of honey, is both the main source of U.S. honey imports and the major competitor of U.S. honey in world markets. Because of these factors, Mexican honey production and trade are important to the U.S. honey industry.

Most of the recent advances in Mexico's honey industry have come from increased colony numbers, but yields per colony also have risen.

A large part of total honey production is exported, as domestic consumption remains limited.

Many different types of honey are produced in Mexico, and the country has ample floral cover for beekeeping. From its humid coastal lowlands to the sweeping plateaus and up the slopes of the lofty mountains, Mexico has a multiplicity of floral sources —a wide variety of agricultural crops and many types of wild flowers.

Some of these sources remain to be developed, while further gains can come from modernizing the beekeeping industry.

Beekeeping is a profitable endeavor in Mexico. Production costs are relatively low. Modern production methods are employed on the larger, more efficient operations while a plentiful labor supply and relatively low wages are key factors in the success of the smaller enterprises.

Honey has been produced in Mexico for centuries. The pre-Mayan tribes of the Gulf Coast used bees to obtain both honey and wax.

The Mayans were important bee raisers on the Yucatán Peninsula more than a thousand years ago, utilizing the stingless bees they believed to be favored by the gods.

Honey that was surplus to local needs was exported to other tribes, and from this tradition of consuming limited amounts of honey as food while exporting ever-increasing quantities the present pattern of Mexico's thriving honey industry has emerged.

The major destinations—in order of importance—for Mexico's honey in 1977 were West Germany, the United States, and the United Kingdom.

In the United States, an increasing amount of Mexican honey apparently is being blended with American honey for table and other uses because of declining U.S. supplies and changing consumer tastes. Formerly, much of Mexico's honey was used by the baking industry, but competition has arisen from lower priced sweeteners.

Mexican honey for export is finding a ready market in 1978, and stocks are expected to remain low.

Mexico's export prices have risen significantly since last year. In August, the export price (f.o.b. Progresso, Yucatán) for Yucatán light amber honey was about $900 per ton, compared with $730 per ton a year earlier, and orange blossom honey was quoted at $1,100 per ton, compared with $980 per ton a year earlier.

The higher dollar prices are attributed to strengthening of the Japanese yen and the German mark against the U.S. dollar, as well as to the short supply of honey.

Major obstacles to development of the industry include lack of financing, low educational levels, poor technology, lack of research and—to some extent—extension, and considerable use of unimproved bee stock.

However, Mexico's honey industry is expected to continue advancing as greater emphasis is placed on increasing yields rather than on expanding colony numbers.

As the best floral resources have already been developed, greater use of modern hives and improved technology is expected to be made. However, a good floral source base exists and an abundant labor supply for beekeeping is available. How these assets are used will determine the industry's future. □

By Gordon E. Patty, agricultural economist, Horticultural and Tropical Products, Commodity Programs, FAS.

Hollowed-out tree trunks serve as beehives at some Mexican apiaries. Mexico's 1978 honey output will be less than 1977's.

EC Adjustment Period Over, Irish Project Modest Growth for '78

By Robin Mosse

Top: Irish lambs grazing on leafy turnip tops;
Above: Cabbage and carrots growing on milled peat in Ireland's County Kildare.

Following a 9 percent real growth in agricultural output and a 39 percent rise in farmer income in 1977, Irish agriculture now appears set for a more modest 4 percent growth in production during 1978.

Now that Ireland's transition to full membership in the European Community is complete and with the EC Commission agreeing to relatively smaller price increases for 1978, the value of output probably will rise this year about 12 percent to the equivalent of $2.91 billion. The main impetus to growth in 1978 will again be the dairy industry.

However, in spite of 1977's good growth rates, overall performance of Irish agriculture under EC membership has been disappointing so far. Average growth since joining the EC has been no better than in the hungry years of pre-EC membership and has failed to meet expected targets. Output actually fell 4.4 percent in 1976, and 1977 output—although well above the 1976 level—was only 4.7 percent above 1975 levels in volume terms.

Centuries of poor prices and uncertain, restricted markets have long been blamed for the relatively low output of Irish farms. Despite having some of the best natural pastures in Europe, average stocking rates are low by European standards and Irish dairy cows, although improving in recent years, have the lowest average milk yields in the EC.

In general, Irish farmers have not yet responded as expected to the market security and improved prices that EC membership has brought to most sectors of Irish agriculture.

In the 5 years preceding Ireland's accession to the EC in 1973, annual growth in gross agricultural output (GAO) averaged 3.08 percent per year.

For the following 5 years, the average was only 2.57 percent per year. The estimated 7 percent increase in 1977 brings the 5-year average up to 2.32 percent per year.

Among the factors that led to Ireland's slow growth in agricultural output since joining the EC was the considerable loss of confidence in the EC market system that occurred during the cattle crisis of 1974/75, when EC buying for intervention stocks failed to prevent falling market prices in Ireland.

The result was a rapid decline of beef breeding cow numbers, which since 1974 have declined by over 25 percent.

Dairy cow numbers also decreased in 1975, but have since recovered.

Because Ireland depends upon the beef cattle and dairy industry for two-thirds of its GAO, the decline in cow numbers, with resulting smaller calf crops, has had a serious effect on total agricultural output.

In Ireland, beef cows are a nonintensive and low-profit enterprise, so unless new schemes are introduced to stimulate recovery of beef cow numbers, Ireland will continue to depend heavily on the dairy herd to supply calves for beef production.

The Agricultural Institute, Ireland's main agricultural research organization, predicts a 4 percent increase in GAO for 1978 and—not surprisingly—most of this gain is expected to come from the dairy industry.

Manufacturing milk out-

Mr. Mosse is the agricultural specialist in the U.S. Agricultural Attaché's office, Dublin.

put grew 9 percent in 1977 to an estimated 3,502,000 metric tons, and is forecast to increase by 11 to 12 percent in 1978.

Although the EC is trying to counter dairy surpluses by reducing dairy herds in member countries, the Irish consider a healthy, growing dairy industry essential to continued growth in total agricultural output.

As a result, Ireland's dairy output is growing rapidly—not only through expanding dairy cow numbers but also through improved productivity per cow.

The principal reason for the marked increase in milk production is that any improvement in Irish milk output—with the lowest production per cow in the EC and stocking rates well below potential—starts from a very low plateau.

Significant advances are possible at this stage merely through basic improvements in management, feeding, and breeding techniques.

Dairy farmers also are being urged to make these improvements by the Government, farm organizations, the Agricultural Institute, and local cooperatives, many of which now have their own advisory networks and special financing schemes for farm improvement.

The forecast gain in the GAO for 1978 could also be aided by a slight rise in beef cattle and hog output. However, other sectors of Ireland's agriculture will offer little assistance in raising total agricultural output in 1978.

Grain production will likely equal the 1977 level as expanded plantings are offset by a probable decline in yields from the exceptionally high level achieved in 1977.

Most other farm enterprises probably will remain about static in output for most of 1978.

There are differing opinions on prospects for growth beyond 1978. Some believe Irish farmers, far from responding to increased incentives, may now find themselves able to attain an acceptable standard of living without exerting any extra effort.

On the other hand, many expect growth in agricultural output during the next several years to be well above that of the past 5 years, with dairying being the major factor.

The Institute suggests that only now are Irish farmers beginning to respond to the better market conditions and see the recent Government target of a 25 percent increase in agricultural output during 1977-80 as attainable, although such a growth rate over a sustained period would be almost unprecedented.

This growth is being actively encouraged by publicity campaigns organized by Government, advisory, commercial, and farm organizations.

The central theme of these campaigns: Ireland is now a fully integrated member of the EC, and substantial growth in income henceforth must come from expanded output instead of from the big price rises that Ireland experienced during transition in alining its prices upward to match the EC's higher levels.

Better feeding and management of livestock—particularly dairy cows—are a central feature, and response is already evident in a substantial increase in dairy feed usage during 1977/78. The extent to which the beef breeding herd can be stimulated into recovery also will be crucial. □

Pakistan: Expanding Market for U.S. Tallow

By M. Arif Mahmood

Pakistan's rising personal income and population growth, with resulting higher consumption levels for food, soap, and toiletry products, are generating expanded demand for imported tallow—especially U.S. tallow.

Pakistan, an increasingly important market for U.S. tallow during the past 20 years, in calendar 1977 was one of the world's 10 leading customers for U.S. tallow, taking 49,685 metric tons valued at $22.5 million.

Tallow shipments accounted for 26 percent of the total $85-million value of U.S. agricultural exports to Pakistan in 1977.

In addition to its uses in the production of food, soap, and toiletry items, tallow has a potential market in Pakistan's compound feed industry. However, because the country's livestock industry is developing slowly, any large-scale expansion in feed compounding lies beyond the immediate future.

Pakistan slaughters about 3.37 million cattle and buffalo, and about 18.89 million sheep and goats annually, but commercial tallow output is negligible.

Most of the animal fat resulting from slaughter is consumed directly in household cooking (especially of fried foods) or eaten with cooked meat. Only relatively small quantities—probably 10,000-15,000 tons annually—of tallow go to bakeries or soap manufacturers.

The prevailing systems of animal slaughter and marketing of meat make it uneconomic to feed back the raw fat trimmings and bones generated at retail shops to the tallow-rendering industry.

The marketing system has developed over the years to serve the particular consumption pattern of a Moslem society that prefers to buy meat freshly slaughtered each day—slaughtered according to Moslem law—from small retail shops.

The small amounts of fat trimmings and bones at each of the country's numerous retail shops are in uneconomic quantities for collection and transport to tallow rendering plants.

In the absence of national price and production policies and a larger scale meat marketing system, tallow output is most likely to lag far behind the rapidly growing population, which is increasing about 3 percent annually.

Also, the present slow rate of growth of the country's dairy cattle and goat industry indicates no ap-

The author is agricultural specialist in the Office of the U.S. Agricultural Attaché, Islamabad.

preciable short-term improvement in butter oil output.

As a result, Pakistan will continue to depend on imported tallow for a consistent and regular supply. The present consumption level of household-generated tallow is expected to continue because of the relatively low cost of this tallow and the low levels of domestically produced edible oil and butter oil supplies.

Government efforts to boost the country's edible oil production are still in the preliminary stages and are not likely to result in significantly higher levels of output for some time.

The limited application of new technologies and supplies of agricultural inputs presently used in production of the principal food and fiber crops prohibit any substantial effort to divert these production resources to expand output of edible oil crops.

Also, sufficient price incentives will have to be available before any significant shift in the existing crop pattern occurs—a situation that leaves little optimism for higher domestic production of edible oils in the short run.

Pakistan's imports of tallow from the United States prior to 1970 were largely under the provisions of Public Law 480, Title I, and the U.S. AID Commodity Import Program (CIP). Cumulative shipments of U.S. tallow financed under this program during 1955-1969 totaled 168,950 tons, valued at $30.3 million.

Beginning in 1971 and continuing through June 1976, tallow was on Pakistan's so-called tied list and could be imported only by using foreign credits (including P.L. 480 and CIP), loans, or barter from the countries that offered this sort of arrangement.

Each importer was allocated a share of the funds available under these credit arrangements. Cash imports were prohibited. During this period, CIP loans became the principal source of funding U.S. tallow imports. The first commodity loan was signed in 1962, but the bulk—about 87 percent—of tallow imported under the CIP arrived during 1971-76.

A cumulative $52.4 million was allocated for tallow imports under this program and an estimated 166,640 tons were imported. CIP loans to Pakistan ended in February 1976, although purchases from these funds continued to arrive until the end of that fiscal year.

Pakistan's entire import needs for tallow are now met through cash purchases. Since July 1976, tallow has been on Pakistan's so-called free list—i.e., importers holding valid Pakistani import licenses are free to purchase any quantity with cash or foreign credit financing.

A restriction that permitted only industrial consumers to import tallow was withdrawn with the announcement of the current import policy in July 1977. However, the import duty on tallow was doubled to 25 percent ad valorem, starting with 1977/78 (October-September), to curb excessive buying and generate additional revenue. The import duty during 1971-76 ranged from 10 to 12 percent.

Following the major shift in the Government's import policy (from the tied list to the free list) imports of tallow continued to come from the United States, averaging 29,846 tons annually during the 1960's and rising to 36,063 tons during 1971-77. □

Swiss Goal: Increased Food Self-Sufficiency

By Reinhold Schwarz

Switzerland's planned 13 percent expansion in field crop area by 1980, which has its roots in a basic national commitment to a higher level of food self-sufficiency, could result in declining markets for U.S. grain.

The 5-year Swiss agricultural production program includes the ambitious target of a 37,470-hectare expansion in crop area to 300,000 hectares. Inherent in the program is a reduced dependency on imported grain—both for food and feed—and an effort to convert pasture that now supports excess milk production into grain crop.

Even though the targeted goal may not be achieved within the relatively short time allotted, the Swiss Government has a mandate to work toward greater food and feed self-sufficiency, and the trend is expected to continue.

Although the program outlined by the Swiss Working Group for Guidance of Agricultural Production is not legally binding, it is within the general parameters of current Swiss agricultural policy and is enhanced by the reputations of the working group's members.

Safeguarding the nation's domestic food supplies continues to be a major objective of Switzerland's defense policies. The experience of a landlocked, neutral country surrounded by combatants during past wars has vividly demonstrated Swiss vulnerability to dependency upon outside sources for vital food supplies.

In reaching out for expanded grain area, the Swiss program assumes:

- No possibility of bring-

Mr. Schwarz is a professional agriculturalist in the Office of the U.S. Agricultural Attaché, Bern.

Switzerland: Imports as Percentage of Consumption

Year	Breadgrains (excl. Durum)			Feedgrains		
	U.S.	Total	Total as percent of consumption[1]	U.S.	Total	Total as percent of consumption
	MT	MT	Percent	MT	MT	Percent
1970/71	73,433	195,714	24.9	163,411	1,154,134	83.1
1973/74	100,720	237,621	41.8	204,637	1,159,892	76.4
1974/75	40,556	157,140	23.4	234,302	1,150,323	74.0
1975/76	68,146	138,033	21.3	118,066	1,016,676	73
1976/77	91,586	200,267	29.6	280,680	981,732	73.5
1977/78	[2]91,191	[2]187,142	[2]29.7	[2]261,108	[2]1,055,773	[2]74.5
1980/81	[2]0	[2]137,000	[2]21.0	[2]0	[2]880,000	[2]65.0

[1] Exports are insignificant. [2] Estimate. Sources: Swiss Farmers Union, Swiss Grain Board, Swiss Customs.

ing new land under production.

- Little, if any, increase in disposable income through 1980.
- An annual population growth rate of 0.2 percent.
- That Swiss foreign-trade policy will support a reduction in directly competitive imports to acceptable levels.

It is more than coincidental that the program's target area corresponds exactly with that planned to be under production in the first year of a wartime economy.

Also, an ordinance published in July 1977 recommended an extension to 280,000 hectares (excluding 20,000 hectares in corn silage) planted to field crops, but did not specify a target date.

The main thrusts of the crop-expansion program are to increase breadgrain area by 16,800 hectares (17.5 percent) to 113,000 hectares, and feedgrains area by 18,400 hectares (22.5 percent) to 100,000 hectares, compared with 1975/76 levels.

If reached, production from the targeted breadgrain area would provide a self-sufficiency rate of 70-80 percent and insure that the share of domestic breadgrains in the volume milled by commercial mills would range from 60 to 80 percent. In absolute terms, this corresponds to 270,000-360,000 metric tons, based on the average of 450,000 tons milled over the past 3 crop years.

Under Switzerland's wheat price support program, all marketed breadgrains are owned by the Grain Board, which allocates them to the commercial mills and prescribes the minimum proportion of domestic grains to be used in the milling blend.

As projected under the plan for crop year 1980/81, domestic stocks would provide about 72 percent of domestic needs, and in a year of good yields could surpass 80 percent.

If production targets are reached, they could reduce breadgrain imports to about 137,000 tons by 1980/81 or about one-fourth less than the recent annual average of about 180,000 tons.

Although it is diminishing, the Swiss preference for Canadian wheat has not offered U.S. exporters much of a chance to account for even half of the Swiss market—in some years, only one-fourth. Thus, it is reasonable to assume that the United States would absorb some of the quantitative loss from an increase in self-sufficiency.

The crop-expansion plan is not without its opponents. The Swiss Millers' Union is opposed on the basis of what it believes would be a marked reduction in flour quality if the proportion of imported wheats should be reduced below 30 percent.

Further, it contends, Swiss foreign trade officials should negotiate assurances from the principal suppliers—the United States and Canada—that grain would be available for Switzerland—a regular cash consumer—during periods of short supply.

It is the feedgrain sector, however, that the program designers believe holds the greatest potential for expansion. Domestic production generally covers only about one-fourth of Swiss needs. Their target, therefore, is 100,000 hectares by 1980.

From the base year 1975, the increase would amount to more than 18,000 hectares, divided into 5,400 hectares of corn for grain and 12,900 of other feedgrains—mainly barley and oats.

Assuming a continuation of the average yields of about 63 quintals per hectare for corn and 42 for other feedgrains, production would rise to 171,000 tons of corn and 305,000 tons of mainly barley and oats, or 20 and 30 percent increases, respectively, from 1975/76 levels.

The consequence, of course, would be a reduction in feedgrain imports to about 880,000 tons or about 17 percent below the recent average of just over 1,050,000 tons.

Although the United States is not the principal supplier (France is first, with a combination of feed wheat, corn, and barley), imports from the United States probably would decline—perhaps disproportionately, assuming French grain production and European Community export subsidies are not reduced.

Inducements for producers to plant up to the targeted area are in principle the same as those currently offered, except that they will have to be increased—i.e., higher guaranteed prices and area premiums.

Because Switzerland has virtually no new agricultural land to be brought into production, all or most of the added crop area will have to be taken from existing pasture.

If successful, the program would also help to reduce surplus milk production, thus curtailing the amount of milk used for manufacture of dairy products such as dry milk, butter, and cheese, which have created disposal problems in world markets already burdened with excess dairy product stocks.

Pasture area is readily available for conversion to field crops. Of 760,000 hectares in grazing land in 1975 (not including summer pasture), there were about 515,000 hectares in prime pasture, compared with about 820,000 hectares of grazing land and 555 hectares in prime pasture 20 years earlier.

Theoretically, at least, the 35,000 hectares needed to reach the targeted breadgrain and feedgrain goals can be found. The shift would have to be borne by dairymen in the flatland, as there are no substitute agricultural operations for dairying in the Alpine valleys and on the high slopes.

Under recent price and area incentives, breadgrain area rose between 1975 and 1977 by 4,500 hectares to 100,000 hectares, but

Switzerland: Field Crops Area

(in hectares)

Crop	1970	1975	1977	1980 [1]
Breadgrains	110,840	96,167	98,000	113,000
Corn (for grain)	9,290	21,546	18,000	27,000
Other feedgrains	51,490	60,091	57,900	73,000
Field beans	—	1,087	300	2,000
Ensilage and green corn	11,230	27,119	31,000	20,000
Potatoes	31,000	23,811	23,000	25,000
Sugarbeets	9,040	10,641	12,100	14,000
Rapeseed	8,790	9,283	11,480	13,000
Feedbeets	5,220	2,636	2,300	2,500
Subtotal	236,900	252,381	254,080	289,500
Vegetables, tobacco, etc.	10,410	10,149	9,680	10,500
Total	247,310	262,530	263,760	300,000

[1] Target. Sources: Swiss Farmers Union; Swiss Agricultural Production Program, 1976-1980.

feedgrain area declined to 75,900 hectares, down 5,737 hectares in the 2 years.

In direct contrast to the plan, area planted to ensilage and green corn increased to 31,000 hectares, up about 3,900 from the 1975 level instead of declining toward the 1980 goal of 20,000 hectares.

Despite Government efforts to push for expanded breadgrain and feedgrain area at the expense of dairy pastures, a comparison of producer income from grain farming with that of dairying shows why the plan has been stalled.

A dairyman with two or three cows per hectare, each yielding about 4,000 kilograms of milk annually and receiving a guaranteed price for fresh milk equal to about 44 U.S. cents[1] per kilogram, can realize an income of $4,000-$4,330 per hectare.

A wheat farmer, on the other hand, can expect a yield of about 45 quintals per hectare in good years, which at the guaranteed price of about $55 per 100 kilograms for top-quality wheat would gross the equivalent of $2,539 per hectare.

Because of Governmental policy to maintain income parity between and among various grains, barley and corn producers would gross about the same as wheat producers. Thus, despite higher input costs for dairying, net returns—not considering labor—still favor the producer.

To equalize—if not reverse—the disparity favoring dairymen would require substantially higher producer prices and/or area premiums not especially attractive to Federal budget designers. □

[1] *Converted at 1 Swiss franc= US$0.5772.*

Polish Grain Crop Up, Imports To Be Sizable

Although Poland's grain crop will be somewhat larger in 1978 than in 1977, that country will again be importing a sizable volume of grain during the current July-June year, further contributing to Poland's agricultural trade balance deficit.

In July, Polish officials said the 1978 outturn of its major grain crops (rye, wheat, barley, oats, and mixed grains) would probably fall somewhere between the 19.4 million metric tons harvested in 1977, and the 20.8 million tons of 1976. Consequently, it is expected Poland will have to import at least 5-6 million tons of grain in the period July 1978-June 1979, compared with Polish import estimates of around 7 million tons in 1977/78.

The United States granted Poland a $514 million CCC (Commodity Credit Corporation) credit for fiscal 1978, a sum larger than the total value of Polish agricultural imports from the United States in any previous year.

Polish imports as of July 30, 1978, indicated that Poland would be able to use by September 30, 1978, the allocated CCC credits, which consist of $324 million for grain ($246 million for feedgrains, $78 million for wheat), $126 million for protein feeds, $34 million for soybeans, and $30 million for other products.

A U.S.-Polish working group met July 10 and 11 to discuss agricultural trade between the two countries. Stefan Zawodzinski, First Deputy Minister of Agriculture, headed the Polish negotiators, and USDA's Edward Schuh, Deputy Assistant Secretary for International Affairs and Commodity Programs, the U.S. delegation.

Poland's agricultural trade deficit in 1977 and preceding years contributed significantly to its total foreign debt which accumulated to about $14 billion (all hard currency accounts) by the end of 1977, according to Western sources. Poland's debt servicing in coming years is estimated to take up half of its export earnings.

To remedy its adverse trade balance, Poland planned to increase exports by 75 percent but imports by only 25 percent during the 1976-80 plan period. This target was not met in 1976, when both imports and exports increased 11 percent. In 1977, the import growth was at the planned annual rate of 5 percent but export growth of 11 percent a year remained below the goal set.

In the first 5 months of 1978, however, the value of imports and exports remained unchanged, compared with the same period in 1977. No breakdown is available on how much of this trade was conducted on dollar and how much on ruble accounts. While total Polish imports declined, imports of agricultural raw materials increased by 6 percent (January-March data).—*By Thomas A. Vankai, ESCS.* □

Iran Holds Agricultural Trade Talks With Australia and Pakistan

Iran recently held separate meetings on joint agricultural cooperation and trade with Australia and Pakistan. An Iranian delegation, led by Agricultural Minister Ahmadi, visited Australia to discuss opportunities for expanded trade and increased economic cooperation.

At an Inter-Ministerial Meeting in June, Australian officials sought information from their Iranian counterparts on longer term trade in live sheep, mutton, and beef. They also discussed potential sales of wheat, coarse grains, wool, and dairy cattle.

On furthering agricultural cooperation, the hosts assured the Iranians of continued assistance in dry land farming—with an Australian technical mission scheduled to go to Iran soon. The Australians also offered help in milk plant management, seed production, grain storage and handling, and cold storage construction.

In the Iranian-Pakistani discussions, the two nations agreed to form committees for the continuance of trade and cooperation in agriculture, industries, and mining following 4 days of talks when Pakistan's advisor on ports, shipping, and export promotion met with his Iranian hosts. □

Iran's Demand For Red Meat Increasing

Iran's rising demand for red meat in the face of a relatively stagnant domestic production level of about 545,000 metric tons between 1976/77 (March 21-March 20) and 1977/78 caused the country's self-sufficiency rate for red meat to decline from 81 percent to 76 percent, according to a dispatch from the U.S. Agricultural Attaché's office, Tehran.

Although the Government offers incentives for expanded production of meat, poultry, and dairy products, consumer price controls tend to offset the beef and sheep incentives.

Poultry and dairy expansion is continuing, and poultry meat self-sufficiency may be attained by the end of this year. In 1977/78, the increase in poultry meat production was large enough to allow a reduction in imports of more than a third.

Consumption of red meat in Iran during 1977/78 was 719,000 tons—about 20 kilograms per capita—and poultry meat consumption 219,000 tons—6.4 kilograms per capita.

Iran's imports of sheep increased by 1 million head between 1976/77 and 1977/78 to 3.5 million head, of which 2.5 million came from Australia and 1 million from Romania and Bulgaria. Sheep imports are expected to decline to 2.5-3 million head in 1978/79 because of the high level of sheep meat inventories.

Sheep meat imports for 1977/78 rose to 80,000 tons from 58,000 tons in 1976/77. Australia supplied an estimated 32,000 tons, New Zealand 34,000 tons, and Eastern Europe about 14,000 tons. Imports of sheep meat are expected to decline in 1978/79.

Beef imports in 1977/78 were an estimated 30,000 tons, of which 12,000 tons came from Australia, 12,000 tons from France, and 6,000 tons from Romania and Bulgaria. Imports during 1978/79 are expected to be slightly higher.

The Iran Meat Organization (IMO) announced in February that beef and poultry imports would be turned over to the private sector. One effect of this decision is to open Iran's small but growing market for high-quality beef to all foreign suppliers. Previously, the United States had been the sole supplier of primal and portion-controlled cuts of beef for the hotel, restaurant, and supermarket trade. The IMO continues to import live sheep, sheep meat, and carcass beef.

Imports of cattle hides are estimated at about 10,000 tons for 1977/78, compared with nearly 9,000 tons in 1976/77. □

Spain Boosts Production, Exports of Iceberg Lettuce

Spain's output of iceberg lettuce—a relatively new crop in that country—totaled an estimated 2,000 metric tons in 1977; 1,650 tons were exported.

These exports are expected to rise to a significant level over the next several years because of the product's agreeable taste and good keeping characteristics, according to José E. Vidal, senior agricultural specialist in the U.S. Agricultural Attaché's office, Madrid. Vidal estimates returns to producers during the 1976/77 season at about $370 per ton.

Spain, a leading fresh vegetable producer in Europe, continually seeks new or expanded products for export, Vidal points out. Iceberg lettuce was first introduced about 5 years ago in the Ebro River Delta.

Iceberg lettuce production in Spain is a highly specialized operation, based on U.S. seeds and cultivation techniques. It is an intensely managed industry, and mechanized to a substantial degree. Irrigation is necessary, and fungal diseases are a threat.

The harvest season extends from October to June, and exports go primarily to the Scandinavian countries, Switzerland, and the Netherlands. The most important competitors are the United States, France, and Italy.

Packed for export in vented cartons of 24-30 heads and shipped under refrigeration by truck and rail, the lettuce requires from 3½ to 5 days to reach its markets.

How well Spanish iceberg lettuce is promoted in north European markets will to a large extent determine the future expansion of this crop. So far, only limited promotional efforts have been exerted in Sweden and Switzerland.

Lettuce imports into European Community countries are not subject to quantitative restrictions and import duties range from 15 to 18 percent ad valorem. □

Foreign Agriculture

Vol. XVI No. 41
October 9, 1978

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The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Foreign Agriculture* has been approved by the Director, Office of Management and Budget, through June 30, 1979. Yearly subscription rate: $38.00 domestic, $48.00 foreign; single copies 80 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Contents of this magazine may be reprinted freely. Use of commercial and trade names does not imply approval or constitute endorsement by USDA or Foreign Agricultural Service.

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New Bread Introduced, Office Opened by USDA Cooperators

Developing a new-type bread for the Japanese market and moving a regional office in Latin America to improve service in the area, are among the latest activities by Wheat Associates, USA, and Great Plains Wheat, Inc., USDA cooperators.

Shikishima/Pasco Baking Company, a subsidiary of Japan's second largest baking firm, plans full-scale production this fall of the new bread—the first in Japan made only of U.S. wheats.

Called "Toast Sandwich" bread, the new product was market tested earlier this year by one of Japan's largest research companies. The new bread was developed in a cooperative program by the Japan Institute of Baking, Shikishima Baking Company, and Wheat Associates.

The decision to go into full production of the new bread was based on a program testing five different flours ground from U.S. Hard Red Winter and Dark Northern Spring wheats. The flour blend winning the best reception with the 10,000 consumers participating in the research program contains DNS-14 percent protein and HRW-13 percent.

In the past, Japanese bakers apparently believed that bread flours had to include some from Canadian wheat to make the best baked products. The experience of Shikishima/Pasco confirmed once again the fact that this is not the case. As a result, sales of U.S. wheat to Japan, which totaled well over 3 million tons in 1977, could expand as more Japanese bakers began to make all-U.S. wheat products.

The Great Plains Wheat office move is being made to expand its activities in Latin America.

The first move in the expansion program will be to relocate its Regional Office from Caracas, Venezuela, to Guatemala City, Guatemala, a site that will provide a centrally located base of operations for its promotion activities in the Central American and Caribbean regions.

Donald Schultz, Great Plains Wheat Regional Director for Latin America and the Caribbean, will head the Guatemala City office in his current capacity.

Toward the end of 1978, a new GPW office will be opened in Santiago, Chile, to plan and implement wheat market development in South America. □

Pasco salesgirl showing loaves of "Toast Sandwich" bread, a new type developed by the Japan Institute of Baking, Shikishimal-Pasco Baking Co., and Wheat Associates, USA.